

Summary Statement of Standards for Paediatric IV Fluids (2nd edition)

The purpose of these standards is to enable safe and appropriate use of IV fluids for children and neonates across NSW.

IV FLUID CONTENT

FOR CHILDREN (excluding neonates)

Specialist consultation recommended when prescribing for infants < 3 months neonatal fluids may be more appropriate.

For Resuscitation / Bolus

- **0.9% sodium chloride**

Alternatively and ONLY under direction of Specialist:

- other crystalloids, e.g. balanced salt solutions, or colloids may be used.

For Replacement Fluids (dehydration or ongoing losses)

- **0.9% sodium chloride + 5% glucose +/- potassium chloride 20mmol/L**

Alternatively and ONLY under direction of Specialist

- *Plasma-Lyte148 + 5% glucose.*

For Maintenance Fluids

- **0.9% sodium chloride + 5% glucose +/- potassium chloride 20mmol/L**

Alternatively and ONLY under direction of Specialist:

- *0.45% sodium chloride 5% glucose +/- potassium chloride 20mmol/L or*
- *Plasma-Lyte148 + 5% glucose.*

If electrolytes are outside the normal range, discussion with a specialist is necessary

IV FLUID CONTENT

FOR NEONATES (less than one month of age corrected)

For neonates in neonatal nurseries (excluding neonatal intensive care), or presenting to emergency departments, or admitted to paediatric wards.

For Resuscitation / Bolus

- **0.9% sodium chloride**

For Fluids (dehydration or ongoing losses) or Maintenance

Special Care Nurseries - DAY 1

- **10% glucose**

Special Care Nurseries – DAY 2 onwards

- **0.225% sodium chloride + 10% glucose +/- potassium chloride 10mmol/500mL**

Emergency Departments

- **0.45% sodium chloride + 10% glucose (NO potassium chloride)**

Paediatric Wards

- **0.45% sodium chloride + 10% glucose +/- potassium chloride 10mmol/500mL**

If electrolytes are outside the normal range, discussion with a specialist is necessary

IV FLUID BAGS PROCUREMENT AND USE

- It is **strongly recommended** that **pre-packaged bags** of appropriate IV fluids **are available and used** with the correct concentrations of sodium, glucose and potassium, **across all NSW facilities**, avoiding the practice of local additives, whenever possible.
- Fluids for children are recommended in 1000mL bags.
- Fluids for neonates are recommended in 500mL bags.

IV FLUID BAG LABELLING

- The content of the IV fluid bag will be clearly indicated in an easy-to-read font and a prominent location on the IV fluid bag. Suitability for use in children will be indicated, where appropriate.
- IV fluids containing potassium chloride will clearly identify this additive.
- IV fluids containing 0.225%, 0.22% or 0.18% sodium chloride include a low sodium content warning.
- Bags used in children and neonates are expected to include 'Infusion Pump Recommended' on the label.

IV FLUID ADMINISTRATION

- NSW Health PD2010_034 states that "Paediatric infusion sets with inline burette must be used for all children requiring intravenous therapy. An infusion pump should be used for all children". For the safety of paediatric and neonatal patients, **both infusion pumps AND inline burettes are strongly recommended** with all maintenance and replacement fluids.
- All user-applied Labelling of Injectable Medicines, Fluids and Lines to follow the national Labelling Recommendations.
- Hourly observations of the IV fluids and IV cannula site should be documented.

EDUCATION AND COMMUNICATION

- The Skills in Paediatrics (SKIP) education module is being updated.
- Relevant current education and information resources will be updated to reflect the second edition of the Standards.
- The Standards are available via the NSW Kids and Families website.

ADDITIONAL SAFETY MEASURES

- **If a child or neonate is prescribed IV Fluids not recommended in the Standards then please clarify reason and document in medical notes.**
- Local Health Districts/Specialty Health Networks have been asked to ensure that, as a low sodium containing product for neonates, 0.225% sodium chloride should only be available with 10% glucose and be stored only in dedicated maternity / neonatal units.
- Fluids with sodium chloride 0.225%, 0.22% or 0.18% may continue to be used in adult practice but should NOT be available for children.
- IV fluids containing potassium chloride are potentially hazardous and should be administered with extreme caution.